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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,754

09/12/2003

Nobuo Komeyama

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EXAMINER

BINDA, GREGORY JOHN

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,754

Applicant(s)

KOMEYAMA ET AL.

Examiner

Greg Binda

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 11-14 and 38-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11-14 and 38-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on various is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on December 7, 2005 has been entered.

Election/Restrictions

3. Applicant's election without traverse of a cross joint (Group I) in the reply filed on October 20, 2004 is acknowledged.

Drawings

4. The drawings are objected to because:
 - a. Fig. 3 (see its most recent version filed September 1, 2005) does not make sense. The residual compressive stress plotted along the y axis decreases in value as the distance along the axis increases.

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- b. At page 11, lines 8+ and page 12, lines 22+, residual compressive stress is described as being larger than 800MPa at depths of at least 0.3mm, but Fig. 3 shows residual compressive stress being less than 800MPa at depths greater than 0.3mm.
 - c. The drawings fails to show the following limitations:
 - i. Claim 1, lines 7 & 8 and claim 50: “each of the shoulder portions [having] a round-shaped section in a section including an axis center of the shaft”
 - ii. Claim 1, line 11 and claim 50: “the round-shaped does not include a concave corner”
5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The disclosure is objected to because page 9, line 13 refers to “the inventors and the like of the invention”. To whom is “the like” referring? Did someone other than the named inventors contribute to the making of the alleged invention?

7. The specification is objected to as failing to provide proper antecedent basis for the following claimed subject matter:

- a. Claims 41 & 42: all limitations therein
- b. Claim 43, lines 5-7: all limitations therein

Claim Objections

8. Claims 38, 39, 48 & 49 objected to under 37 CFR 1.75 as being substantial duplicates of claims 13, 14, 44 & 45.

Claim Rejections - 35 USC § 112

9. Claims 1-4, 11-14 & 38-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has not pointed out where the following limitations are supported,

nor does there appear to be a written description of the limitation in the application as originally filed:

- a. Claim 1, lines 7 & 8 and claim 50, lines 7 & 8: “each of the shoulder portions [having] a round-shaped section in a section including an axis center of the shaft”
- b. Claim 1, lines 9-11 and claim 50, lines 9-11: “the round-shaped section has a center of curvature at an outer side of the cross shaft member, wherein the round-shaped section does not include a concave corner”.
- c. Claim 1, lines 15-17: “residual compressive stress at a depth of at least 0.3mm . . . is larger than a residual compressive stress at the deeper portions”
- d. Claims 14, 39, 45, 47, 49: all limitations therein

10. Claims 1-4, 11-14 & 38-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 1, lines 7 & 8 and claim 50, lines 7 & 8, recite the limitation, “a round-shaped section in a section including an axis center of the shaft”. The meaning of this limitation is unknown.
- b. Claim 1, lines 9-11 and claim 50, lines 9-11, recite the limitation, “the round-shaped section has a center of curvature at an outer side of the cross shaft member, wherein the round-shaped section does not include a concave corner”. Such a configuration is not possible. Fig. 1 clearly shows that when the center curvature is at the outer side of the cross shaft joint it forms a concave corner.

- c. Claim 1, lines 15-17 recites the nonsensical limitation, “residual compressive stress at a depth of at least 0.3mm [i.e. portions with at a depth of 0.3mm and deeper portions] . . . is larger than a residual compressive stress at the deeper portions”. How is it possible for the deeper portions to have a residual compressive stress that is larger than the residual compressive stress of the deeper portions?
- d. Claim 2 recites the limitation, “a bearing cup”. It is not clear if this bearing cup is included with, or exclusive of the bearing cups recited in claim 1, line 6.
- e. Claims 13 & 38 recite the limitation, “the roller burnishing of the shoulder increases a surface hardness of the shoulder”. It is unclear how this further limits the alleged invention given the limitations recited at claim 1, lines 12 & 13.
- f. Claim 46 recites the limitation, “the roller burnishing of the race portion increases a surface hardness of the race portion”. It is unclear how this further limits the alleged invention given the limitations recited at claim 43, lines 2 & 3.

Conclusion

11. The absence of prior art rejections should not be construed as an indication of allowable subject matter but for the presence of a 112 rejections. Rather, such absence is due to the fact that the Office is constrained from making a prior art rejection where there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of a claim. *In re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962).

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (571) 272-7077. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greg Binda
Primary Examiner
Art Unit 3679